sealift

MAGAZINE OF THE MILITARY SEALIFT COMMAND

APRIL 1974

HELLLLLLP!

The written word may not be as dramatic as that shouted plea would be if heard aboard a ship at sea, but we hope it attracts your attention — and that you read on.

Rear Admiral John D. Chase is away from his headquarters, and his usual comments are not available, and so I would like to take advantage of this space to make a point I consider important.

Sealift is your magazine. It is not a headquarters publication. It's purpose is rather broad, we admit. First, we hope to recognize the achievements of MSC people and the ships they man or offices and ships they staff. Secondly, we hope to provide valuable information for those outside of MSC — but who are members of the military organizations we serve, or the maritime industry which serves us all.

Obviously, we can't simply manufacture information and we don't want to merely publish articles which extoll the virtues of MSC. Just as all of us tend to judge people by their actions, not their names, we form our opinion about a military command from what we know about the accomplishments of its people.

Who is doing what, when, where, and what was the impact of their performance? How well was something accomplished? Answer these questions and we can also respond to the key question: Why does MSC exist?

We simply cannot answer those questions without your help. Reports and messages we see are useful, but official language somehow fails to adequately report on activities. It tends to center on ships, on units, and on functions and is, to put it bluntly, often dull reading.

We need names. We want to know how people react in an emergency, how they felt, what they said. We need to know about the men or ships who do a routine job especially well, or meet a unique requirement. To get that kind of information, we must rely upon people who are there, where the action is, on you and your shipmates.

In recent months we have received a few reports from masters on rescues at sea. They were great, for they had the kind of information we needed, the kind noted above. In another instance, an MSC officer reported sighting a belching volcano at sea, and he sent both pictures and his impressions of the scene. In the past, we also have occasionally received articles written by crewmen aboard MSC ships — and we printed most of them.

Problem is, we do not get enough of this type of material. Our plea, as it says up there at the top of the page is "HELLLLLP!" We would like to hear from you. If you can't write like Herman Melville we don't care. Just send us an informal note telling us what happened, with full names of course. If you're a would-be author send us your stuff. We'll use it. If you have pictures, that's frosting on our editorial cake. We will return them, of course. Or, give us a call. Our number is (202) 282-2808. Address is on the contents page.

We would like to see you in Sealift too.

Larry C. Manning

Legislative and Public Affairs Officer

COVER: USNS Passumpsic boatswains Arthur Moore (left) and Richard Martinez struggle to connect fuel lines from the pier. Story on page 11.

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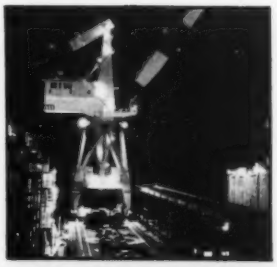
Features:



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Bath Iron Works

A historical sketch of the shipbuilding corporation and what lies ahead.

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Man Overboard!

USNS McGraw is involved in the dramatic rescue of survivors from a capsized vessel.

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The "Bunyon Watch"

What is 650 feet long, 200 feet wide, frozen solid and floating in millions of gallons of liquid?

Also:

USNS Passumpsic with the fleet—page 11; Legion commander speaks—page 19; Masters, Mates and Pilots school—page 20.

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Rebirth of a Shipyard

By Linda McDaniel

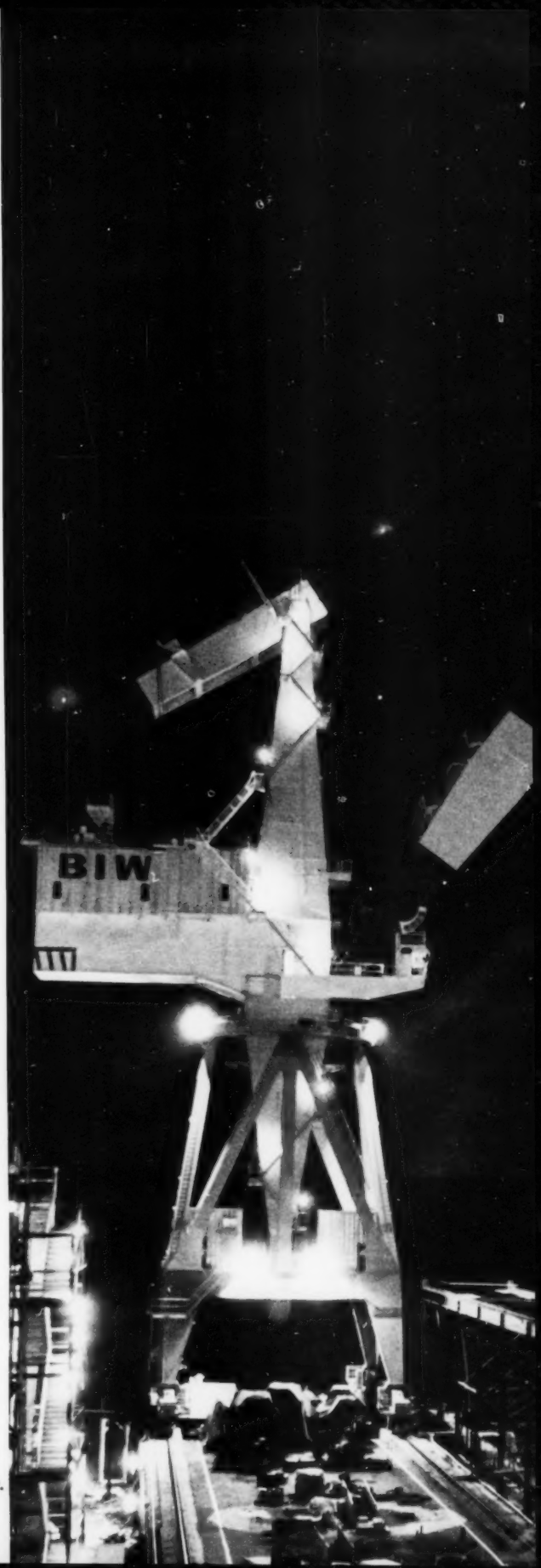
When William "Pete" Newell revisited Bath Iron Works two years after its bankruptcy in 1925, he found the shipyard desolate and its production facilities almost completely dismantled — its equipment having long ago gone on the auctioneer's block. Little remained to remind him of the bustling activity, and near-deafening banging and clanging that once typified the New England shipyard. Except for the 100-ton wharf derrick which had fallen down, there was little evidence of the pride and skill that had gone into the building of some of the finest yachts, steamers, torpedo boats, and destroyers ever produced.

Pete Newell had been with Bath Iron Works, Ltd. before its demise and had first-hand knowledge of the company's outstanding reputation. Joining the company in 1902, some 18 years after it was founded by Gen. Thomas W. Hyde in 1884, Newell spent many years of his youth at Bath. By 1915 he had worked his way up to engineering works manager. He remained there until the company folded primarily because of slackened naval construction following World War I.

Newell tried to gain control of the company after it floundered. But, when it was put up for public auction in October 1925, Newell was outbid by Ralph O. Dale of Bath, agent for Theodore Friedberg of New York.

Understandably, the gloomy sight of the idle shipyard only renewed Newell's resolution to continue ship construction at the Bath, Maine shipyard, and to create jobs for its highly skilled workforce. His resolution gave Bath Iron Works a new lease on life.

Newell conferred with many colleagues, who supported his revival plan for the plant, before approaching New England Public Service. An affiliate of Maine Power Co., the organization acquired the real estate after Friedberg had sold most of the equipment and tools. Having arranged to lease the facility for



Bath's 200-ton capacity crane.

$17,000 a year, Newell gave up a well-paid job as general manager of the New York Shipbuilding Co. plant in Camden, N. J. and set about rebuilding the Bath yard.

There was no shortage of problems. Rounding up equipment, operating capital, contracts, and workmen, were simply a few of the things he had to tackle to get the newly created Bath Iron Works Corp. on its feet.

There was one thing, however, he did not have to worry about. Bath Iron Works had a reputation among American shipyards for producing sturdy, reliable, and comely vessels beginning with the steamer Cottage City, first ship built by Bath.

The defunct company had also impressed the Navy. In fact, after Bath Iron Works won an 1890 government contract for the gunboats Machias and Castine, it built the first steel vessels in the state of Maine. That first contract between the Navy and Bath also was the beginning of an enduring and vital relationship between government and private shipbuilders, a relationship tested during the United States' involvement in World War I, and in the years that preceeded that conflict.

By 1912 Bath had become the leading builder of Navy destroyers. The Army and Navy Register once commented upon Bath's receipt of a naval contract to build two destroyers saying, "This is a little surprising since the Bath bid was the highest, but the award is based on the fact that the Bath Iron Works has gained a reputation as 'the builder' of destroyers." In 1915 Bath constructed the destroyer Wadsworth, the first geared turbine naval vessel. Bath also excelled in construction of torpedo boats, torpedo boat destroyers, and battleships.

The technical know-how and craftsmanship of Bath's architects and workmen did not escape the attention of those with sporting blood. Bath had constructed many fine yachts before Newell took over. Among them was the Eleanor, built for railroad mogul James J. Hill. She reportedly sailed more than 80,000 miles before needing any repairs.

Bath also built the luxurious 302-foot Aphrodite. At the time of her launching in 1898, she was larger than most passenger ships in the coastal fleet.

The America's Cup defender, Defiance, built at a cost of $100,000, was another product of Bath Iron Works.

The failure of William Cramp & Sons Shipbuilding Co. of Philadelphia in 1927 came at an opportune time for Bath. It made available much of the equipment Newell needed to rationalize the yard. Introduced to the auctioneer by Cramp officials, Newell, short on cash, did a little wheeling and dealing to acquire equipment he needed. He paid the auctioneer part of the purchase price from his own pocket, and agreed to pay off the balance in installments, not a common business practice at that time.

Soon afterwards, Newell got a contract from Ernest B. Dane of Massachusetts to build the 240-foot yacht,

Vanda. Dane advanced him 15 per cent of the price of the Vanda, and Gielow, Inc., which had the design contract on the Vanda, put up $100,000 in operating capital in exchange for stock in the corporation.

With equipment, machinery, a contract, and some operating capital, Newell appointed himself president of the new company and scouted the New England coastline to recruit workmen skilled in marine construction. This was an easy task, for many were anxious to return to the plant, and happy to see the company resurrected since shipbuilding was the region's prime industry.

He also recruited some of his friends from the ranks of other companies. Among them were Archibald M. Main, consulting naval architect at the Pusey and Jones Shipyard at Wilmington, Del., who became vice president and naval architect. L. Eugene Thebeau, formerly general agent for Main Central Railroad, was made secretary and treasurer. A former Bath Iron Works, Ltd. employee, Sidney L. Eaton, was appointed assistant treasurer and chief clerk. Roland F. Hill, former assistant superintendent at New York Shipbuilding Co., became general yard superintendent. Norman McKinnon was recruited from Pusey and Jones and named hull supervisor.

In less time than he expected, Newell had all the officers needed to oversee the company's activities and 300 workmen to begin construction of the Vanda, first ship to slide down Bath's ways in more than two years.

Not long after the Vanda was launched, Newell secured contracts to build trawlers for Frank J. O'Hara of Boston, the yacht Hi Esmaro for H. Edward Manville, and J. H. Doval's yacht, Paragon. Bath Iron Works Corp. was off to a fast start, but Newell knew he had to keep up the pace to meet an ever increasing payroll.

Corsair IV, acclaimed the most beautiful yacht ever built, was launched at Bath in April 1930. The 343-foot-long ship was built for J. P. Morgan II and painstaking attention had been given to even the smallest details of her construction. Solidly built, the yacht served as a patrol boat during World War II, and as a passenger cruise ship before going aground off Acapulco, Mexico in 1949.

In anticipation of the upcoming America's Cup races, Newell was persuaded by the president of Gielow, Inc. to build, for potential buyers, five seagoing yachts of a basic design. Named the Placida, Sylvia, Kendkora II, Trudione, and Aletes, all were launched in 1930. Price tag on each was $500,000.

The stock market crash of 1929 that ushered in the depresssion also halted the yacht-building boom at Bath. Few people had money to operate such costly craft during the depression years. Despite their untimely launching, however, Newell managed to find buyers for all but one of the five yachts, the Aletes. It was sold to the Navy nearly 10 years after its launching.

In 1936 Bath Iron Works began building the America's Cup defender, Ranger. Launched in May 1937, the yacht sailed in 29 formal races that season, and won them all. Probably the most famous of all racing yachts, she was broken up and melted down soon after the Japanese attack on Pearl Harbor.

The dwindling demand for yachts might again have spelled the end of Bath Iron Works had it not been for the U.S. Coast Guard. It needed seven patrol cutters and Bath got the contract to build them. That was another break, but even better things were to come.

Shortly before the cutters were completed in 1931 and 1932, Bath was awarded a Navy contract to build the destroyer USS Dewey — first Navy order in almost a decade. The last destroyer built by Bath had been the Pruitt, delivered in 1920.

Plenty of naval contracts were in the future for Bath and all other American shipyards as the United States began to build up its combatant fleet. Contracts for construction of the destroyers Drayton and Lamson, fastest ships in the Navy when delivered, also were let to Bath.

The destroyers yielded a substantial profit, and by 1936 Bath was financially sound. Net working capital at the end of the year had risen from the original $125,000 to more than $1.2 million. The capital was sorely needed for future shipbuilding.

Congress appropriated the then mind-boggling sum of $1.5 billion in 1940 for naval construction. It also declared all destroyers more than 16 years old as over-age. A whole new fleet of destroyers had to be built and Bath did its part.

In 1943 Bath Iron Works employed more than 12,000 people — 1,600 of whom were women. Forty-two Bath built destroyers were delivered to the Navy during 1943 and 1944. The year before, Bath built 15 destroyers. In recognition of the astounding speed at which these ships were constructed, the company was presented a Navy "E" pennant for performance excellence in 1942. Four more such awards were earned before the end of the war.

Outstanding among Bath-built destroyers was the O'Bannon. Delivered in June 1942, she received a Presidential Unit Citation and her captain, Donald J. MacDonald, became the most decorated man in the United States Navy.

The destroyer Nicholas, launched at Bath only a month before the O'Bannon, also received a Presidential Unit Citation for her part in the battle of Kula Gulf. Instrumental in the recapture of Corregidor, the Nicholas valiantly drew enemy fire as troops and paratroopers siezed the fortress.

J.P. Morgan's Corsair IV.

Bath Iron Works built almost 80 destroyers for the United States Navy during World War II. It's not uncommon for a Navy officer to speak with awe of the durability and performance of Bath built ships.

In 1946, seven executives retired from Bath Iron Works, among them Pete Newell. However, he continued to serve as president until succeeded by his son, John R. Newell, in 1950.

Peacetime conversion was difficult for many shipyards, but Pete Newell anticipated the drastic decline in naval contracts, being well aware that a similar situation caused the failure of Bath Iron Works, Ltd. after World War I.

He quickly obtained a contract to build 16 trawlers for the French government to replace boats French fishermen lost during the war. Reconversion contracts were received from the Navy and a few contracts for yachts were accepted. Bath also diversified its activities, purchasing the Pennsylvania Crushing Co., builder of heavy industrial crushing machinery. All of this helped Bath remain solvent, and its workers' skill and pride in craftsmanship alive along the Kennebec River.

Today Bath Iron Works Corp. is headed by James F. Goodrich, elected president in 1965. And the art of shipbuilding is still practiced there, evidenced by the construction and January 26 launching of the 25,000-deadweight ton tanker, USNS Sealift Atlantic. A second tanker, USNS Mediterranean Sea, was launched March 9.

The first tankers to be constructed at the Maine shipyard in its 90-year history, the two ships demonstrate Bath Iron Works' readiness and ability to tackle new ship construction challenges.

Altogether, Bath Iron Works is building five Sealift class tankers. Sealift Caribbean will slide down the ways in June. Sealift Arctic will be launched in July and Sealift Antarctic in September.

Bath is now completing a $15 million shipyard modernization program begun in 1971. To reduce shipbuilding costs, speed construction, and expand the market in which the company can compete, new buildings have been constructed, sandblast and paint facilities enlarged, and a 200-ton capacity crane installed. All were needed to handle the more than the $280 million backlog of orders Bath Iron Works holds. Bath officials estimate present orders will keep the yard busy through 1977. ⚓

'Man Overboard!'

By Louis R. Granger

Breakfast was over and the 0800 (8 a.m.) watch had just taken over. The crew of USNS Pvt. Francis X. McGraw was settling in to the daily shipboard activities on a routine passage from Subic Bay in the Philippines to Cat Lai, South Vietnam.

The South China Sea was rough that February 13. Although the weather was clear, winds were about 30 knots, and seas were running about eight feet high with swells climbing to 15 feet.

At 8:10 a.m. the routine ended. Both Able Seaman Fermin Santos and Ordinary Seaman Obed Rodriguez sighted a man in the water. Their "man overboard" warning to the bridge set off events that resulted in saving six of 16 men who had abandoned the Philippine ship Load Star after she capsized when her load of logs shifted in rough seas.

When Third Officer Leo A. Boudreau, watch officer, got word there was a man in the water, he ordered the rudder "hard over," threw a life ring buoy and a smoke signal into the sea and sounded the "man overboard" alarm. It took Capt. George Violante a minute and a half to take command of the bridge and begin to get the McGraw into position to rescue the bobbing man in the water.

"Because of rough seas, high swells and strong wind, I decided against using ship's lifeboats," said Captain Violante. "Instead I decided to maneuver McGraw alongside the man."

The captain had confidence in this procedure because of past experience in maneuvering a fully-loaded Victory ship alongside an object in the water.

"Because of the seas and swells, it was difficult to keep the man in sight. At 0830 he was again sighted. To avoid injuring him, I maneuvered McGraw up-wind of him, stopped the engines, and allowed McGraw to drift towards the survivor."

Meanwhile, First Officer Bernard J. Pinkiewicz had prepared boarding stations on both sides of the ship, forward and aft. Jacob's ladders were hung over both sides along with ring buoys with lines attached. Floating heaving lines and ropes also were streamed over both sides.

The survivor, Vicente Sials, second officer of the Load Star, grabbed a ring buoy and was pulled to the Jacob's ladder where Able Bodied Seaman David Laureano was waiting to assist him.

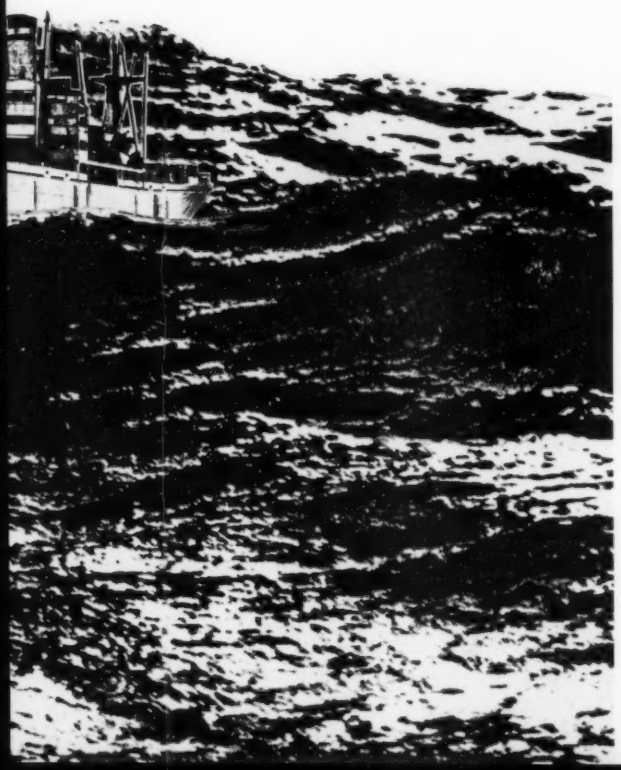
Sials told his rescuers that the Load Star was enroute from Mindoro Island in the Philippines to Manila when it capsized at approximately 1:45 a.m. that day.

"All hands now became lookouts," said the captain. "All eyes were trained upon the surface of the heaving sea."

No sooner was Sials on his way to the ship's hospital for treatment of exhaustion and minor cuts, when two men wearing life jackets and another without life saving gear were sighted.

"Again I maneuvered McGraw to a lee (the protected side of the ship away from the wind), stopped the engines, and drifted towards them." Although only two minutes had gone by since they were sighted, the third person, a 14-year-old boy, apparently too exhausted to hold on a few more minutes, slipped under the surface and drowned with rescuers in sight.

Again Laureano descended a Jacob's ladder, along with Quartermaster Andres Silva and crane operator Gorlito Madrid, to assist the survivors.



At 9:23 a.m. the fourth man was sighted about 600 yards off. "I found it difficult to turn," said Captain Violante. "By backing, then going ahead over and over, I used the wind and seas to my advantage for turning the ship within a smaller circle and for reducing the radius to the man in the water. In less than 50 minutes after he was sighted, Ordinary Seaman Fernando Duloc was aboard.

Minutes later another man was spotted in the water about 300 yards off. Again Laureano went down the ladder, this time with Able Seaman James E. Bench, and pulled Chief Mate Grecerio Stomguio to the Jacob's ladder.

Stomguio said nine men, mostly engine department personnel either went down with the Load Star or were drifting in a rubber raft.

The search continued. "I sensed, without knowing how or why, that someone else was near," said the captain.

And at 10:44, a log was sighted 800 yards off — with a man clinging to it. The seas, swells and wind increased. Maneuvering McGraw became more difficult. Many times the man and log were sighted, only to disappear again in the heaving swells.

"Thanks to constant bearing taking and vigilant lookouts, we managed to close the distance and get the sixth survivor alongside at 1130 hours. He was exhausted and wasn't wearing a lifejacket," said Captain Violante.

This was the sixth and last of the survivors to be located — Load Star Capt. Germersindo Ungui. But for the determination of the McGraw crew, Captain Ungui might not be alive today. Captain Violante described his rescue.

"At 1133 hours, a life ring and lifeline were passed to him. He pulled the life ring buoy down over his waist, let go of the log he had sat astride for so many hours, and was pulled next to a Jacob's ladder.

He was exhausted and dazed; apparently didn't see the Jacob's ladder, but clung to the lifeline. The seas heaved, tossing him alternately almost up to the ship's main deck and then into a deep depression made alongside the ship by the receding seas.

"All the while Laureano had been on the Jacob's ladder to render assistance. But the captain was a heavy-set man, wet and exhausted, a deadweight that was more than Laureano could handle. The ship took a roll and the survivor fell back into the sea and slipped out of his life ring. He was still alongside, and, in desperation, he grabbed one of the many lifelines that streamed alongside McGraw. Another life ring was tossed to him which he grabbed.

"Able Seaman Bench, wearing a safety harness, went down another Jacob's ladder, plunged into the sea behind the survivor, tied a lifeline around the man's waist, and guided him to the Jacob's ladder. The men on

deck pulled on the line holding the survivor by the waist, and Bench nudged him up the ladder from below."

The survivors had drifted nearly 15 miles from where the Load Star had capsized and were in the sea from seven to nine hours. After Captain Ungui climbed aboard, the McGraw headed back to Subic Bay, after sending a message to all ships in the vicinity to be on the lookout for other survivors.

Clothing and money were given to the survivors by McGraw's crew. On arrival at Subic Bay, the six men climbed aboard a Navy tug and were taken ashore.

Captain Violante attributed much of the success of the rescue to his crew, particularly Laureano, Bench and Rodriguez.

Others he singled out included: Bridge watch — Leo Boudreau, Robert H. Taft, second officer; Able Seaman Barney Lott, wheelsman; and Ordinary Seaman Manuel De Seignoria, lookout. Seamen on deck — Boatswain Ralph E. Bergeron, Willie E. Smith, carpenter; Able Seamen Santos, David Laureano, Lars H. Forsell, Theodore R. Goodman, and Herbert L. Strickland, plus Ordinary Seamen Albert B. Cox and Rubin Jackson.

"Another contributing factor to the success of this rescue was the stamina of those six survivors," said Captain Violante. "Mr. Ungui survived despite the fact that he wore no life jacket. His survival is attributable to his will to live, and his excellent physical condition."

Ten and a half hours after the first survivor was sighted, McGraw was on her way to South Vietnam, once again on a routine passage across the South China Sea. ⚓

USNS Passumpsic

One month at sea with the Seventh Fleet.

After only a month replenishing Seventh Fleet ships, USNS Passumpsic was on her way to becoming one of the top fleet oilers in the Western Pacific.

"As our primary unrep (underway replenishment) oiler this operating period, your fine ship and crew have performed consistently well in seven separate refuelings. You have refined your unrep evolutions to the point of now being among the finest in the fleet within the first month of your providing services."

That praise was given by the commanding officer of USS Midway on February 25, who added in his message to Passumpsic, "Well done and looking forward to working with your fast ship and efficient pumps."

Almost a centenarian in ship years, the 28-year-old vessel underwent a major overhaul and modification of living quarters for its new civilian crew last fall. She joined the fleet in January.

Since then the Passumpsic has completed approximately 70 successful underway replenishments of Navy ships at sea.

The Passumpsic's first unrep was with the carrier USS Kitty Hawk in the last week of January. That successful job earned praise from Rear Adm. John D. Johnson, Jr., commander of Task Group 73.5 who said, "As expected you are off to a fine start." On February 1 Passumpsic rejoined her traveling partner the refrigerated stores ship USS Niagara Falls. They had sailed together to the Western Pacific.

On February 7, following an unrep with another carrier, USS Midway, the commanding officer told the MSC oiler:

"Services provided by Passumpsic February 4 clearly one of the most effective and expeditiously executed unreps experienced by Midway this fiscal year.

"Line handling and short lapsed time to pumping greatly appreciated by this crew after a full day of air operations. Looking forward to future operations with you. Please extend a well done to your crew."

But it takes more than a good support ship to make successful underway replenishments. "Good customers make good unrep ships," said Passumpsic master Lawrence O. Nasset.

"We have been fortunate to have Midway on a number of recent unreps. Their station keeping is outstanding," he said.

Captain Nasset, former master of USNS Taluga, the first MSC oiler in the command's growing fleet support program, said the Passumpsic was "fortunate to have been able to work with them (Midway) so early in our deployment."

The Passumpsic has a helicopter landing pad on her bow so both helicopters and high lines can be used for replenishment. During the first month with the fleet both vertical replenishment from the deck and landings were accomplished.

Third Mates Daniel W. Noonan and Burton L. Holt have been assigned as helicopter landing signal officers and were praised by Captain Nasset as "doing a remarkable job."

Passumpsic was built in Chester, Pa. by the Sun Shipbuilding and Drydock Co. and was commissioned April 1, 1946. She is named for the Passumpsic River in Vermont. Passumpsic is an Indian term meaning, "clear running water." The ship was decommissioned last July 24 and turned over to MSC for Civil Service manning and service with the Pacific area command.

The specialized nature of the Passumpsic's work required her civilian crew to take various training courses before the ship went into service. Almost immediately after joining his new ship, Captain Nasset and 16 crew members received training in newer type transfer rigs not aboard the older vessel Taluga. Other courses and schools attended by members of the crew included:

Petroleum products handling and pollution control, underway replenishment, maintenance and repair of electrical hydraulic units, communications security for the military detachment commander, maintenance of winch equipment, teletype repair, coordinated shipboard allowance list procedures, fleet supply procedures and handling of U.S. mail.

The changeover from Navy to MSC control required a six-month maintenance and repair period. Some work was accomplished at Oakland, Calif. and overhaul was done at Seattle, Wash.

Work progressed relatively smoothly until the ship left California for Washington. Leaky sea valves had to be repaired and a fire broke out on the signal bridge due to shipyard "hot work" in the rigging. Damage was confined to the immediate vicinity of the aft signal bridge but all flags and pennants were destroyed.

With everything ready for support operations, Passumpsic then headed for her new duties with the Seventh Fleet.

Capt. Darrel D. Ruebsamen, Far East Commander, noted that Passumpsic's arrival in the Western Pacific was "another milestone in the increasing role of MSC tanker support of fleet operations."

Welcoming her crew aboard, he said the methods and location of fleet operations in the Western Pacific were continually changing and Passumpsic services "will be much in demand." ⚓

Able Bodied Seaman Bruce Strobridge paints aloft to prevent rust.

Ronald Roach, Oil King, take sounding aboard Passumpsic.

USNS Passumpsic (center) simultaneously transfers fuel to the carrier USS Oriskany and the USS O'Callahan, a destroyer escort.

Photos by PH1 E. George Norris, USN

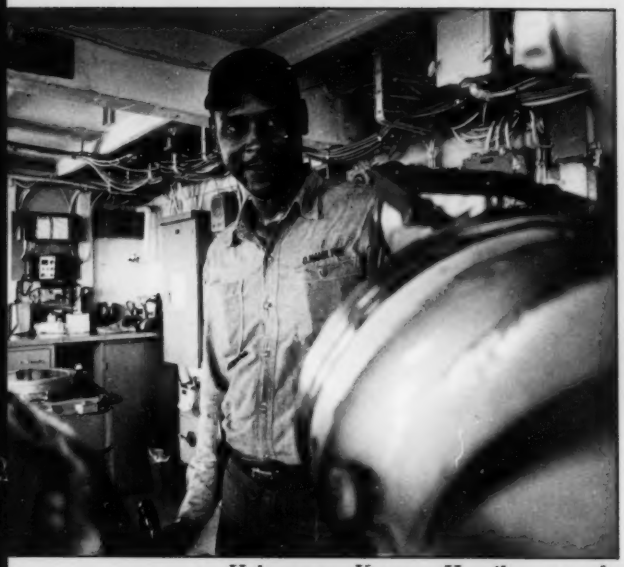
Wiper Woody Kenison's torch cuts through some old piping.

Master Lawrence O. Nasset on the bridge of Passumpsic.

Lt. Robert J. Gillespie, officer in charge of the military detachment.

Civilians and military aboard MSC oilers agree that food is "great."

Chief Mate Gehrig calls to USS Morton and asks them to prepare to receive a shot line from Passumpsic.



Helmsman Kapers Hamilton at the wheel of USNS Passumpsic.

Robert A. Farr, second mate, plots Passumpsic's course and position.

Aerial view of McMurdo harbor and Maumee tied up at the ice wharf.

Keeping a wary lookout for Paul Bunyon

Question:

What is 650 feet long, 200 feet wide, 25 to 28 feet thick, frozen solid and floating in millions of gallons of liquid?

Answer:

An ice cube large enough for Paul Bunyon's Scotch-on-the-rocks.

Close, but no cigar.

It is euphemistically referred to as a huge ice cube, but floats in McMurdo harbor in Antarctica, and is the world's first man-made ice wharf. It is used by Military Sealift Command ships delivering supplies to scientists working at the bottom of the world.

Built last winter by a 156-man Navy Seabee crew at McMurdo Station, the ice wharf is the brainchild of Coast Guard Cmdr. Thomas W. Kirkpatrick, ship operations officer of the Antarctic Task Force. Backed by Navy Capt. Alfred N. Fowler, task force commander, Commander Kirkpatrick planned the construction of a much smaller prototype ice wharf before undertaking the job of building the larger one.

Bales of straw brought to Antarctica from New Zealand, were used to insulate the ice surface and keep it from deteriorating in the warm Antarctic summer sunshine.

The test ice wharf, built in 1972 during the austral summer (which takes place during the northern hemisphere's winter) was formed by alternately flooding and freezing sea water in a ready-formed mold to make a 25 by 50 foot ice cube, 15 feet thick. The cube was successfully used to moor supply ships that called at McMurdo during January 1973. Coast Guard divers kept close watch on the underside of the ice pier and attested to its endurance during the course of the summer.

During the summer of 1973, the men of McMurdo Station anxiously awaited the arrival of MSC ships when their new ice wharf was to be tested.

In order to make the face of the ice pier vertical for the docking of ships, Navy Seabees at McMurdo Station drilled two-inch holes 18 inches apart along the front of the ice cube. The plan was for the U.S. Coast Guard Cutter Staten Island to break away the uneven edge by lopping it off at the perforation. Unfortunately, while trying to move the cube away from the heavy ice that had packed into the bay during the winter, cracks formed that ran the entire width at one end of the wharf. Additional steel bollards were placed in the wharf, and a new network of steel cables linked the smaller broken portions to the larger whole to keep it all together.

Chief Utilitiesman James Wallace supervised the ice wharf's construction by the Navy Seabees. Dedicated October 16, 1973, the wharf was named "Wally's Wharf" in honor of Chief Wallace.

By January 17, 1974, the ice pier had been covered by an eight to 12-inch layer of lava and a bridge was constructed for heavy trucks to drive on and off the ice pier.

First ship to arrive at the pier that day was USNS Pvt. John R. Towle laden with 3½ million pounds of cargo. Before Towle arrived, the way had been cleared by Coast Guard icebreakers Staten Island and Glacier, which cut a 17-mile channel through the frozen ice of the Ross Sea.

Why all the effort to build a big ice cube? The answer is the lack of dependable berthing facilities at McMurdo.

Capt. Alfred N. Fowler, left, Deep Freeze commander, and Coast Guard Cmdr. Thomas Kirkpatrick, designer of the ice wharf, at McMurdo Station.

During 1972, Navy Seabees at McMurdo completely rebuilt two sections of the docking wall of the bay, but their work was virtually destroyed in March, when a storm shoved giant blocks of ice into the pier area.

The ice wharf was formed by pumping huge volumes of seawater into reusable plywood forms with bottoms and sides made of water-filled plastic tubing six inches in diameter. The water was allowed to freeze and its weight lowered it into the water, whereupon a new layer was started.

Several problems hampered the construction of the wharf in addition to the difficulties encountered by continual darkness and sub-zero temperatures. High winds, tides and variations in temperatures all added to the monumental task of the Seabees.

The Seabees found that the plastic tubing could not contain the great weight of the ice cube, so they built a

four-foot high snow wall by hand and shovel. It worked. The remaining three snow walls were built with the help of a bulldozer.

By August 1973, after seven months of exhausting work, the ice wharf was ready to receive MSC supply ships.

USNS Towle left Davisville, R.I. December 19, 1973 and traveled down the East Coast, through the Panama Canal, across the Pacific Ocean to 60 degrees south latitude and into Antarctic waters. She worked her way to the edge of the 17-mile channel and waited for it to be cleared.

In the early morning of January 19, Staten Island escorted Towle through the channel and into McMurdo harbor. The captain of the Staten Island turned his ship and set up currents with his screws, clearing the remaining ice blocks from the front of the ice wharf. Towle's master, Clifford D. Henry, then manuevered his ship alongside the icebreaker, and after a nudge, Towle became the first ship to successfully dock at the world's first artificially developed ice wharf.

After unloading timber, plywood, pipes, kerosene, oil, vehicles, steel, frozen meat and vegetables, butter, eggs, cheese, potatoes, onions, dry goods, hardware and all the other essentials needed by Deep Freeze men and women, USNS Towle departed-five days after she had arrived.

A few days later, another MSC ship, USNS Maumee arrived at the giant ice pier with 5½ million gallons of fuel. She didn't get it all unloaded though. Because of the conservation efforts of the men and women at McMurdo, they have had a 24 per cent reduction in fuel consumption since last December. After completely filling all the tanks at McMurdo Station, Maumee still had 54,000 gallons of diesel fuel in her tanks.

Pulling away from the ice pier on January 29, Maumee drifted back and slammed against a solid wall of ice, crushing her steering assembly with her rudder turned hard left. Despite frigid winds and driving snow, the crews of Maumee and Staten Island, and Navy Seabees labored for three days and succeeded in temporarily repairing the steering for her 2,000 mile passage to Wellington, New Zealand.

As far as everyone is concerned, the giant ice cube has been a huge success, and those who work in the Antarctic are awaiting the return of USNS Towle with her second load. But, rumor has it that lookouts have been stationed to warn the inhabitants of McMurdo if big Paul Bunyon decides he's thirsty, and needs a king-sized ice cube for his before dinner cocktail. ⚓

USNS Maumee ties up at the world's first man-made ice pier. A covering of lava gives it the dark appearance.

United States Merchant Marine

"Lifeline for a 'have not' nation."

"It may come as a shock to many Americans but the United States of America, one of the most affluent societies of human history, is a 'have not' nation when it comes to adequate supplies of raw materials to keep the country moving full speed ahead."

Using the current energy crisis as but one example, Robert E. L. Eaton, national commander of the American Legion elaborated on that theme in a recent speech to members of the Washington chapter of the Propeller Club.

Speaking in Washington, D.C. March 19, the Legion commander stressed the need for a strong merchant marine, both for economic and military security. He pointed out that 2.7 million Legionaires had relied on commercial ships during four wars in the 20th century. "Our lifeline, under combat conditions," he said, "was the merchant marine. America's lifeline today, under peacetime conditions, still is the merchant marine, for our country relies on shipping to bring in the vast supplies of materials we need just to keep going."

Noting that the United States is dependent upon other countries for varying percentages of 69 of the 71 materials deemed critical to our economy and defense, he said "it remains a hard fact that more than 95 per cent of those materials ... come into our ports under foreign flags."

The American Legion national commander reminded his audience that chromium is imported from Russia, South Africa, Rhodesia and Turkey, and that the United States consumes 28 per cent of the world's production. However, it mines no chromium within the country.

Manganese, he said, is imported from Brazil and five African nations, tin from Malaysia, Thailand, Bolivia, Brazil and Zaire. The United States has almost no domestic reserves of manganese, he reported, and has only a nine-month reserve stock of tin, although we use 30 per cent of the non-communist world's production.

"Only 4.72 per cent of all those essentials are being transported to our country on U.S. flag vessels. Even more startling is the fact that no U.S. flag tankers are carrying crude oil to U.S. ports — and that was true before the oil embargo."

Again stressing the American Legion's advocacy of a dominant U.S. merchant fleet "second to none in the world," Eaton said the fact that 95 per cent of imported materials are delivered in U.S. ports by foreign flag vessels was not what the Legion had in mind when it pushed for development of the U.S. flag fleet.

"We rather visualized the day when America would quit playing Russian roulette with the U.S. merchant fleet."

However, Eaton told an enthusiastic audience, composed of shipping people, transportation officials and military men, the situation "is not as bleak as painted."

The 90 large merchant ships now under order, valued at $3.6 billion and totalling 6 million deadweight tons, represent, he said, almost half of the tonnage of the entire active merchant marine fleet, concluding "things are beginning to happen."

Mr. Eaton recalled that facts and figures presented to the August 1973 American Legion convention "revealed how rapidly the Russian merchant marine is growing as a part of the Soviet objective to rule the seas. Russia's use of its merchant marine as an international political weapon is a very real threat to our own position among the less developed nations of the world."

"Although our merchant marine tonnage still is slightly greater than that of the Russians, the number of ships they have outnumber ours by nearly three to one. The total number of U.S. privately owned and government owned merchant ships is about 1,020, while the latest count of the Russian merchant ships is slightly over 2,700."

"While many Russian ships are smaller than ours, we must recognize that each of these vessels carries the hammer-and-sickle flag as a calling card to open a nation's door."

Compared to the fleets of other nations, the United States does not fare well either, according to the American Legion commander. "It is most significant to note," he said, "that 63 per cent of the overall world fleet is less than 10 years old. Japan has the most modern fleet with 86 per cent of its vessels less than 10 years old. At the other end of the scale comes the United States with some 50 per cent of our fleet more than a quarter-century old, while only 6 per cent of the total world fleet is in that age bracket."

While claiming that the United States still lags behind other countries, especially the Soviet Union, Eaton said the nation seems to now be "on the right track to correct the deficiencies and shortcomings of our merchant marine which accumulated over the past three decades, and not a moment too soon."

"We are confronted with a critical situation with regard to those items for which we are dependent, and we are doubly jeopardized when we are dependent upon foreign flags to bring these much needed materials to us."

Stressing growing public awareness of the importance of the merchant marine to economic self sufficiency, Eaton reminded his audience that the American Legion supported both development of the merchant marine and efforts to generate even broader public understanding of its dual economic-military role. ⚓

It's not Harvard or Yale . . . yet

By Ed Nurenberg

It's not Harvard or Yale, yet. The buildings of the Maritime Institute of Technology and Graduate Studies are too new to have acquired the sprawling ivy characteristic of older educational institutions, and the students for the most part are neither long haired, mustached, nor young. Ranging from 26 to 65, they average 42 years of age.

The campus and buildings of the Maritime Institute are as modern as the school's classroom facilities—and faculty and teaching methods are equally contemporary.

Idea for the maritime school which opened its doors only two years ago was the result of a joint union and maritime management study to determine how unlicensed seamen could upgrade their skills.

The International Organization of Masters, Mates, and Pilots, an AFL–CIO affiliate, together with maritime industry management, funded the study which resulted in establishment and construction of the Maritime Institute of Technology and Graduate Studies.

"With the signing of the Merchant Marine Act of 1970, both union and management had to reassess the entire training picture."

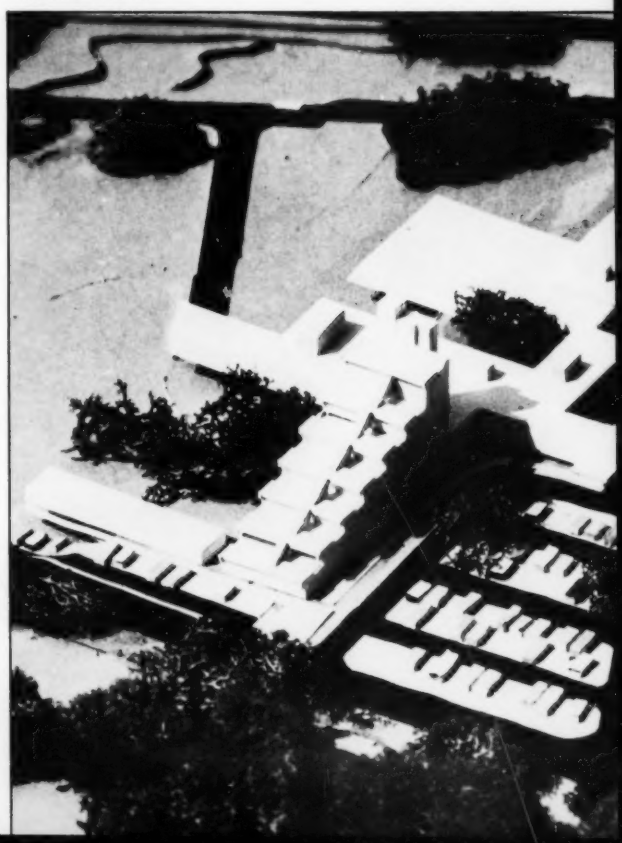
Located in the hills of a Baltimore suburb, the school occupies 50 acres of Linthicum Heights, Md. Currently it consists of two glass and brick buildings, the Charles M. Crooks residence center and the Thomas W. Gleason administration building.

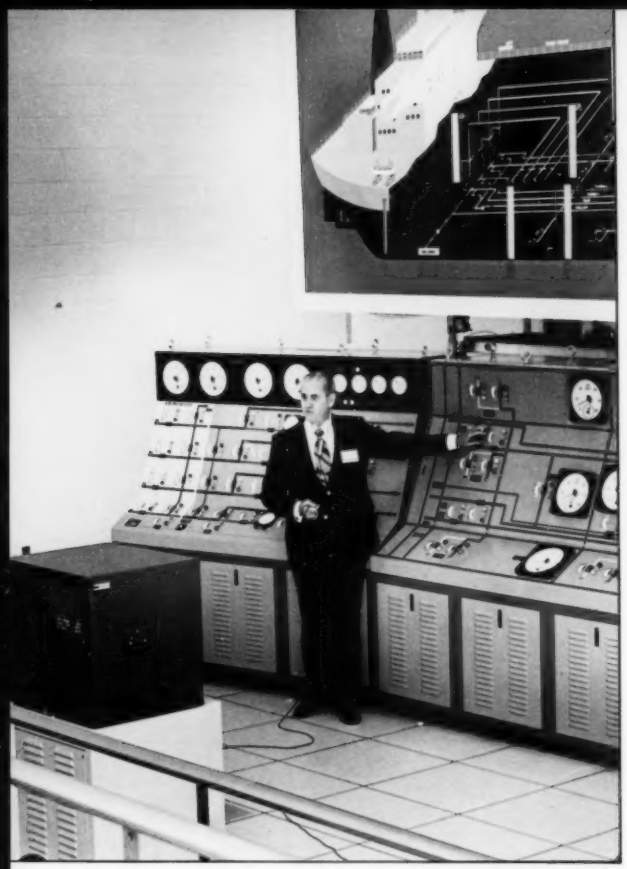
"With the signing of the Merchant Marine Act of 1970, designed to strengthen the U.S. Merchant Marine, both union and management had to reassess the entire training picture," said Dr. A. Sanford Limouze, institute executive director. Dr. Limouze is a past president of the Massachusetts Maritime Academy, former dean of the U.S. Merchant Marine Academy and faculty member of the State University of New York Maritime College.

"Radical technological innovations and changing ship designs were altering conventional maritime practices and perspectives. The trustees concluded that new ships, geared to sophisticated technology, demanded new advanced training of licensed deck officers as well as unlicensed seamen. The speed of modern ships, faster turnarounds, shorter voyages, and highly specialized ship systems combined to create a need for an advanced training program. Therefore, the institute was born," Limouze said.

Four courses are offered by the institute. The license advancement program runs eight weeks and prepares

Original artist's conception of the Maritime Institute of Technology and Graduate Studies. Building at left is the residence hall.





New techniques in the transportation of liquid cargoes are demonstrated by one of the instructors.

deck officers for higher-level Coast Guard licenses. Four-week courses cover operation of modern automated bridge equipment, handling of liquid cargo and collision avoidance by the use of radar. Insruction given in classrooms is supplemented by realistic training in institute simulators able to create almost every problem encountered at sea.

The institute has classrooms with wide desks and comfortable chairs. However, when an old salt enters the collision avoidance radar simulator, he moves into

"Radical technological innovations and changing ship designs were altering conventional maritime practices and perspectives."

a new environment. All of a sudden he's right smack in the middle of a giant computer.

The simulator helps deck officers learn to use radar for collision avoidance and ship piloting. It has eight radar stations, all resembling walk-in coolers. Each contains two radar displays, two plotting tables, a ship control console, and a reference table.

Two instructor consoles are part of the simulator. These house the computers, power supply and programmed problems plus monitoring devices which allow instructors to tell exactly what the students are doing.

Instructors Max Carpenter and Wayne Waldo select problems the students must cope with by pushing buttons on their consoles. Training exercises are selected to familiarize students with two types of shipboard radar use. First is radar piloting of a ship through a congested area and second use of radar to plot the courses of other ships so that decisions made on the bridge are based on factual information.

Collision avoidance is an important subject at the maritime institute—for obvious reasons. With modern ships costing millions, and with human lives at stake, a collision at sea between two seagoing giants has tremendous potential for tragedy. Four weeks of intensive classroom and simulator training equips deck officers to avoid costly collisions.

Around the corner from the radar simulator is the cargo operations training systems facility. Dr. Limouze

explained that "developments in both dry and liquid shipboard cargo operations have created an urgent need for additional training of licensed deck officers. Since they are responsible for handing all types of cargo, they must be familiar with automated equipment on jumbo tankers, container ships, and barge carriers. They must also be skilled in loading and discharging methods and be able to deal with all problems they might face.

The institute also offers a four-week course in both dry and liquid cargo handling. Following classroom sessions, students receive realistic training on a cargo operations trainer. This is a large, animated pictorial display board positioned above and in front of the cargo and ballast control panel. Thirty students can monitor actions by fellow students participating in a training exercise.

"Here again," explains Dr. Limouze, "our training equipment has a research and development capability. Several computer companies are interested in its uses. For example, programs could be developed to enable the computer to evaluate loading plans and to analyze ship construction and cargo handing equipment designs. Actual or hypothetical ship configurations could be simulated, yielding complete data on structural and equipment fatigue during various simulated loading and unloading processes."

"Developments in both dry and liquid shipboard cargo operations have created an urgent need for additional training of licensed deck officers."

Already dazzled by computers, flashing lights and the countless gauges of the cargo operations trainer, visitors generally are not quite ready for the automated bridge console trainer located a few doors down the hall.

This fully automated, simulated bridge is designed to develop the skills required to diagnose malfunctions in a modern ship propulsion system. Cause and effect training is used here.

By observing a display board, in addition to controls and gauges on the bridge and engine room consoles, students actually see what happens when a malfunction occurs. They also deal with problems introduced by an instructor via his trainer control panel, and respond to orders given by students through the bridge and engine room consoles.

"Whole purpose of this training," according to Samuel W. Branin, an institute instructor who is also a chief engineer, "is to improve the decision-making skills by broadening students' operational experience."

James T. Hopkins Jr., dean of administration who holds a bachelor of nautical science from the U.S. Merchant Marine Academy, explains why institute students are highly motivated.

"These men attend these courses on their own time. The eight-week license advancement program, for instance, enables them to upgrade their Coast Guard merchant marine documents. That means more money in their pockets."

The deck officer's employer pays full tuition when he attends the institute. Officer-trainees receive room, board, and instructional material while in attendance. After completion of a course, they are reimbursed for transportation to and from their homes.

Dean Hopkins is especially proud of the Crooks residence center that has a gym and sauna on the top floor. Named for Capt. Charles Crooks, a former MM&P international union president, it opened in June of 1973. It has more than 100 officer-trainee resident quarters plus social and recreational areas. The galley is located on the lower level. Using the natural contours of the site, its west

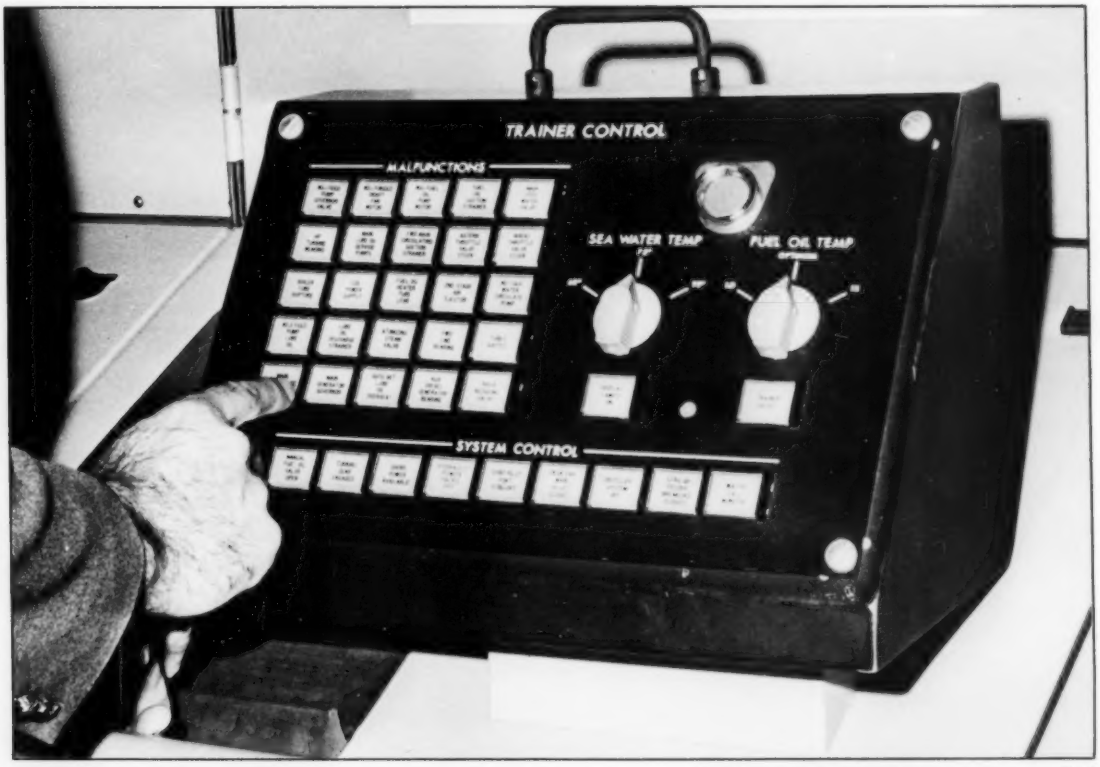
wall is all glass and opens onto terraces and a wooded area. It also is used for social functions, and can serve buffet-style meals for 250 students. Four man dining tables provide for informal discussions on classroom experiences.

"The institute's training facilities and techniques are unmatched by any licensed deck officer training program anywhere in the world."

In Dr. Limouze's office, it is easy to see that the institute will continue to grow. "We have made several new proposals to add to the curricula," he says. "I'd like to see some courses and seminars on maritime law, maritime management and labor relations, as well as courses in satellite navigation. The institute's training facilities and techniques are unmatched by any licensed deck officer training program anywhere in the world. The training is also a bargain."

"Our four-week courses cost about $2,000 as compared to the Dutch who also have a ship handling simulator. They charge $2,000 per man for a course which only lasts a week."

Dr. Limouze describes the institute and the men it trains this way. "The officer-trainee completing our courses will have sharpened his technical skills, strengthened his decision-making capability, and achieved an increased comprehensive knowledge of the merchant marine. This institute, a new departure in maritime education, began as a vision in the minds of a few far-sighted professionals afloat and ashore. The vision attracted others and came quickly into focus as a school designed to make U.S. shipmasters the most highly skilled men on the seas."



Equipment malfunctions are controlled by this console. Students are then required to rectify the trouble on similar bridge and engine room consoles in separate compartments.

stitute has fully automated bridge d engine room simulators to insure t deck and engineering officers are quainted with the latest equipment.

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